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ABSTRACT

The purpose of the present investigation was to examine graduate students' reading comprehension and reading vocabulary, by comparing scores of graduate students on a standardized reading test to scores obtained by a large normative sample of undergraduates. Participants were 59 graduate students from various disciplines, enrolled in three sections of an introductory-level educational research course at a southeastern United States university. These students were administered the Nelson-Denny Reading Test (NDRT)-Form G. Findings revealed that the graduate students had higher scores on the reading comprehension portion of the NDRT than did a normative sample of 5,000 undergraduate students from 38 institutions. Similarly, the graduate students had higher scores on the reading vocabulary portion of the NDRT than did the normative sample. (Contains 16 references.) (Author/RS)

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Abstract

The purpose of the present investigation was to examine graduate students' reading comprehension and reading vocabulary, by comparing scores of graduate students on a standardized reading test to scores obtained by a large normative sample of undergraduates. Participants were 59 graduate students from various disciplines, enrolled in three sections of an introductory-level educational research course at a southeastern university. These students were administered the Nelson-Denny Reading Test (NDRT)–Form G. Findings revealed that the graduate students had higher scores on the reading comprehension portion of the NDRT than did a normative sample of 5,000 undergraduate students from 38 institutions (Cohen's *d* =.71). Similarly, the graduate students had higher scores on the reading vocabulary portion of the NDRT than did the normative sample (*d* = .45).

Levels of Reading Comprehension and Reading Vocabulary Among Graduate Students

Reading is a process of constructing meaning via the active interaction of the reader, the text, and the context of the reading condition that culminates in the acquisition or consolidation of knowledge, information, experience, or wisdom (Anderson & Pearson, 1984; Paris, 1987; Wixson & Peters, 1984). Moreover, reading comprehension is theorized to stem from the reader's ability to integrate efficiently previously acquired knowledge with the information provided in a text (Mason, 1984). As such, the ability to read adequately often is a major cause of success or failure from kindergarten to college, and throughout professional life (Brown, Fishco, & Hanna, 1993).

The importance of reading at the primary and secondary levels has been well documented. For example, at the primary level, Diamond (1997) found that many academically at-risk students were not learning to read by the end of the third grade. At the secondary level, recently, Demps and Onwuegbuzie (in press) reported that eighth-grade reading scores on the Iowa Tests of Basic Skills (ITBS) were statistically significant predictors of success on all five subtests of the Georgia High School Graduation Test (GHSGT) (i.e., Writing, Language Arts, Math, Social Studies, and Science), with correlations ranging from .69 to .86. Students with poor reading skills at the eight-grade level tended to fail the exit examinations, preventing them from timely graduation from high school. Moreover, the *Matthew effect* in reading has been identified (Stanovich, 1986), in which students identified as good readers in early

grades became better readers as they progressed through school with the converse being true for poor readers. The Matthew effect was coined by Merton (1968) after the Biblical statement that "For unto every one that hath shall be given, and he shall have abundance: but from him that hath not shall be taken away even that which he hath" (Gospel according to Matthew, XXV:29). Merton described the Matthew effect with respect to scientific productivity as representing the accumulation of greater increments in recognition for specific scientific works to scientists of notoriety, and the withholding of such recognition from scientists who have not yet established themselves in the field. Merton's idea of the "rich getting richer" was subsequently observed and described in educational settings Stanovich (1986), who suggested that the Matthew effect should be considered in understanding the role of initial reading level on later reading performance.

According to Du Boulay (1999), lack of reading skills is one of the greatest problems in post-secondary education. Unfortunately, unlike the case for primary and secondary schools, reading problems at this level typically are not identified by either students or their teachers until students are far into their programs of study. This failure to diagnose reading difficulties early on stems is certainly related to fact that reading is not routinely assessed at college; yet, ironically, the effects and outcomes from reading are evaluated continuously in a secondary fashion throughout students' college lives (Du Boulay, 1999).

Indubitably, reading represents the most important skill in college. Indeed,

students are often overwhelmed by the quantity of reading required (Du Boulay, 1999). At the undergraduate level, researchers have found that students with lower verbal ability were able to identify individual words and facts but were unable to integrate the information in the text with previously acquired knowledge (Baker, 1985). Further, Baker (1985) noted that students' inability to integrate ideas tended to be associated with an inability to draw logical inferences and the inadequate metacognitive awareness while reading, including the inability to check ideas to determine whether the ideas contradicted one another. Consistent with Baker's findings, Brown and Day (1983) documented that many undergraduate students were unable to summarize, select the topic sentence, invert a topic sentence if it was implied, or write a synopsis of a paragraph in the absence of an explicitly stated topic sentence.

A myriad of studies has found that reading ability predicts educational outcomes among undergraduate students. For example, Wood (1982) found that reading ability, as measured by the Nelson-Denny reading Test (Brown, *et al.,* 1993) was a significant predictor of college freshmen grades. However, scant attention has been paid to the reading ability of graduate students. This inattention probably stems from the fact that educators, in general, assume that this group of students, who represent the upper echelon of academic achievers, have adequate reading skills. Yet, Onwuegbuzie, Slate, and Schwartz (2001) demonstrated that such assumptions should not be made about graduate students. Specifically, these researchers identified several study skill weaknesses in the areas of reading skills among a group of graduate students. For

example, Onwuegbuzie *et al.* found that approximately 87% of students reported that they could read several pages of a textbook without understanding its content, and that reading skill was a predictor of achievement in research methodology courses. This inability to understand textbooks is supported by Onwuegbuzie's (2000) finding that graduate students are nearly 3.5 times more likely to report that they nearly always or always procrastinate on keeping up with weekly reading than are undergraduate students.

Thus, it is clear that the reading skills of graduate students should not be taken for granted. Surprisingly, little or no study appears to have been focused on the reading abilities of graduate students. The purpose of the present investigation was to examine graduate students' reading comprehension and reading vocabulary, by comparing scores on a standardized test of reading given to graduate students to scores obtained by a large normative sample of undergraduates.

Method

Participants were 59 graduate students from various disciplines, enrolled in three sections of an introductory-level educational research course at a southeastern university. These students were administered the Nelson-Denny Reading Test (NDRT)–Form G (Brown, *et al.*, 1993). The NDRT measures reading comprehension (38 items), reading vocabulary (80 items), and reading rate. However, only the reading comprehension and reading vocabulary scores were utilized in the present investigation. This test was utilized because of its widespread use over many years, its

psychometric properties (i.e., total score reliability and validity), and the fact that normative data are available on large samples of high school students and students from two-year and four-year colleges. Interestingly, however, no normative information has been obtained for graduate students—thereby providing a further justification for the study.

Results and Discussion

An independent samples *t*-test revealed that the graduate students (M = 70.00, SD = 5.28) had higher (t = 5.40, $p < .01$) scores on the reading comprehension portion of the NDRT than did a normative sample of 5,000 undergraduate students from 38 institutions studied by Brown, *et al.* (1993) (M = 61.60, SD = 11.94). The effect size associated with this difference was .71, which, using Cohen's (1988) criteria, was large. Similarly, the graduate students (M = 69.63, SD = 6.09) had higher (t = 5.40, $p < .01$) scores on the reading vocabulary portion of the NDRT than did the normative sample (M = 64.52, SD = 11.46). The effect size associated with this difference was .45, which, using Cohen's (1988) criteria, was moderate. Although this finding, which also adds incremental validity to the NDRT, is encouraging, it should be noted that some graduate students in the study received very low reading comprehension and vocabulary scores, with the lowest scores representing the 14th and 24th percentiles with respect to the normative undergraduate students' scores. Future studies should investigate factors that predict graduate students' levels of reading comprehension, as well as determine whether reading comprehension itself is a predictor of future educational outcomes at

the graduate level (e.g., grade point average, completion of dissertation). Indeed, we are currently investigating these and other issues.

References

Anderson, R. C., & Pearson, P. D. (1984). A schema-theoretic view of basic processes in reading. In P. D. Pearson (Ed.), *Handbook of reading research* (pp. 255-293). New York: Longman.

Baker, L. (1985). Differences in the standards used by college students to evaluate their comprehension of expository prose. *Reading Research Quarterly*, 20, 297-313.

Brown, J. I., Fishco, V. V. & Hanna, G. (1993). *Nelson-Denny Reading Test: manual for scoring and interpretation, Forms G and H.* Itasca, IL: Riverside.

Brown, A. L., & Day, J. J. (1983). *Macrorules for summarizing texts: the development of expertise* (Tech Rep No. 270). Urbana: University of Illinois, Center for the Study of Reading.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences.* (2nd ed.) New York: Wiley.

Demps, D. L., & Onwuegbuzie, A. J. (in press). The relationship between eighth-grade reading scores and achievement on the Georgia High School Graduation Test. *Research in the Schools.*

Diamond, P. (1997). *A comparison of ITBS scores below grade level: 1996-1997.* Unpublished manuscript, Valdosta City Schools, Valdosta, GA.

Du Boulay, D. (1999). Argument in reading: what does it involve and how can students become better critical readers? *Teaching in Higher Education*, 4, 147-162.

Mason, J. M. (1984). A schema-theoretic view of the reading process as a basis for comprehension instruction. In G. G. Duffy, L. R. Rochler, & J. Mason (Eds.), *Comprehension instruction* (pp. 26-38). New York: Longman.

Merton, R.K. (1968). The Matthew effect in science. *Science,* 159, 56-63.

Onwuegbuzie, A. J. (2000, April). I'll *begin my statistics assignment tomorrow: the relationship between statistics anxiety and academic procrastination.* Paper presented at the annual conference of the American Educational Research Association (AERA), New Orleans.

Onwuegbuzie, A. J., Slate, J. R., & Schwartz, R. A. (2001). The role of study skills in graduate-level educational research courses. *Journal of Educational Research,* 94, *238-246.*

Paris, S. (1987). Introduction to current issues in reading comprehension. *Educational Psychologist,* 22, 209-213.

Stanovich, K. E. (1986). Matthew effects in reading: some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly,* 21, 360-407.

Wixson, K. K., & Peters, C. W. (1984). Reading redefined: A Michigan Reading Association position paper. *Michigan Reading Journal,* 17, 4-7.

Wood, P. H. (1982). The Nelson-Denny Reading Test as a predictor of college freshman grades. *Educational and Psychological Measurement,* 42, 575.